

### **REMARKS/ARGUMENTS**

This Amendment is filed in response to the final Office Action mailed July 8, 2009. In the Office Action, Claims 1-3, 5-8, 10, 14-19, 21, 25-30, 32, and 36 have been rejected under 35 U.S.C. § 103(a) as being obvious in light of U.S. Patent 6,778,207 to Lee et al. ("*Lee*") in view of U.S. Patent 7,307,654 to Chang ("*Chang*"). Claim 4 has been rejected under 35 U.S.C. § 103(a) as being obvious in light of *Lee* in view of *Chang* and in further view of U.S. Patent 6,445,293 to Alonso et al. ("*Alonso*"). Claims 11, 13, 22, 24, 33, and 35 have been rejected under 35 U.S.C. § 103(a) as being obvious in light of *Lee* in view of *Chang* and in further view of U.S. Published Patent Application 2003/0071906 to Matsumoto ("*Matsumoto*"). Finally, Claims 12, 23, and 34 have been rejected under 35 U.S.C. § 103(a) as being obvious in light of *Lee* in view of *Chang* and *Matsumoto* and in further view of *Alonso*. For the Examiner's reference, Claims 9, 20, and 31 were previously canceled and Claims 1, 14, 25, and 36 have been amended. Thus, as a result of this Amendment, Claims 1-8, 10-19, 21-30, and 32-36 are currently pending in the application for the Examiner's consideration.

#### **Claim Rejections under 35 U.S.C. 103(a)**

##### **Independent Claim 1**

Independent Claim 1 has been rejected as being obvious in light of *Lee* in view of *Chang*. However, Applicants respectfully submit that *Lee* and *Chang* fail to teach or suggest each and every element of newly amended Claim 1. For instance, amended Claim 1 recites the step of calculating the calibration parameters comprising the step of calculating a projective transform by comparing spatial characteristics of the corresponding parts with each other, the corresponding parts being in overlapping parts of the images from the respective cameras. Further, amended Claim 1 recites that the step of generating the wide image video sequence is performed using the projective transform.

On Page 4 of the Office Action, the Examiner has indicated that *Chang* discloses calculating calibration parameters from the relation, the calculated parameters being unique for the at least two cameras and their current location as related to the object being record.

Specifically, the Examiner points to Figures 1 and 3-5 and column 5, lines 12-53, which the Examiner explains that *Chang* describes computing both internal and external calibration parameters of a first camera 14 and a second camera 16. The internal calibration parameters include but are not limited to the focal length and lens distortion of each camera and the external calibration parameters include the relative position and orientation of the first and second cameras 14, 16 with respect to one another.

However, Applicants respectfully point out that the calibration process of *Chang* involves a predesigned calibration pattern 50 in which the size and attributes of the calibration pattern 50 have been previously entered into and are known by the CPU 30. *See* Col. 4, lines 56-67. In contrast, amended Claim 1 recites that the step of calculating calibration parameters comprises the step of calculating a projective transform and that the projective transform is calculated by comparing spatial characteristics of corresponding parts in overlapping parts of the images with each other and not with spatial characteristics of corresponding parts in a pre-determined reference image or calibration pattern. Thus, *Chang* fails to disclose or suggest this feature.

Further, *Lee* fails to overcome the deficiencies of *Chang*. In *Lee*, the transform is calculated based on either predefined geometric information on the camera orientations and image-forming properties, or, preferably, predefined registration points in the images themselves. *See* Col. 3, lines 24-42. Further, *Lee* states that the registration points should be at least four in number as described in copending U.S. patent application 09/572,991 entitled "Apparatus and Method for Indicating a Target by Image Processing without Three-Dimensional Modeling." *Id.* As detailed in this copending application, prior to use of the system, a frontal image of the scene is captured and stored as a reference image in which the positions of the registration marks are "undistorted." *See* ¶¶ [0013], [0016]-[0017], and [0030] of corresponding European patent application EP 1 202 877. The projective transform is then calculated, also prior to use of the system, by comparing the positions of the registration marks in the images from the respective cameras with the positions of the registration marks in the reference image. *Id.* Thus, the reference image may be considered as a "calibration pattern" with which an image captured by a camera of the system is compared to compute a transform for images captured by that particular camera. Therefore, like *Chang*, the transform in *Lee* is calculated by comparing the images

Appl. No.: 10/564,286  
Amdt. dated December 7, 2009  
Reply to Office Action of July 8, 2009

captured by each camera with a “calibration pattern” having a geometry that is pre-stored in the system.

For at least these reasons, Applicants respectfully submit that *Lee* and *Chang* fail to teach or suggest each and every element of amended Claim 1. Accordingly, Applicants respectfully request the Examiner to withdraw the current rejection of this claim.

Dependent Claims 2-8 and 10-13

Claims 2-8 and 10-13 depend from independent Claim 1 and therefore include all of the elements of Claim 1 plus additional elements that further define the invention over the prior art. Accordingly, for at least the reasons set forth above in regard to independent Claim 1 and in light of the additional elements that further define the invention, Applicants respectfully assert that these claims are also in condition for allowance and respectfully request the Examiner to withdraw the current rejections of these claims.

Independent Claim 14

Independent Claim 14 has been rejected as being obvious in light of *Lee* in view of *Chang*. However, Applicants respectfully submit that *Lee* and *Chang* fail to teach or suggest each and every element of Claim 14. For instance, Claim 14 recites the features of: (1) calculating calibration parameters from the relation by calculating a projective transform by comparing spatial characteristics of the corresponding parts with each other; and (2) generating a wide image video sequence by combining the synchronously recorded video sequences using the calculated calibration parameters and using the projective transform. As discussed above in support of Claim 1, *Lee* and *Chang* fail to teach or suggest these features. For at least this reason, Applicants respectfully submit that independent Claim 14 is patentable over *Lee* in view of *Chang* and respectfully request the Examiner to withdraw the rejection of this claim.

Dependent Claims 15-19 and 21-24

Claims 15-19 and 21-24 depend from independent Claim 14 and therefore include all of the elements of Claim 14 plus additional elements that further define the invention over the prior art. Accordingly, for at least the reasons set forth above in regard to independent Claim 14 and

in light of the additional elements that further define the invention, Applicants respectfully assert that these claims are also in condition for allowance and respectfully request the Examiner to withdraw the current rejections of these claims.

Independent Claim 25

Independent Claim 25 has been rejected as being obvious in light of *Lee* in view of *Chang*. However, Applicants respectfully submit that *Lee* and *Chang* fail to teach or suggest each and every element of Claim 25. For instance, Claim 25 recites the features of: (1) calculating calibration parameters from the relation by calculating a projective transform by comparing spatial characteristics of the corresponding parts with each other; and (2) generating a wide image video sequence by combining the synchronously recorded video sequences using the calculated calibration parameters and using the projective transform. As discussed above in support of Claim 1, *Lee* and *Chang* fail to teach or suggest these features. For at least this reason, Applicants respectfully submit that independent Claim 25 is patentable over *Lee* in view of *Chang* and respectfully request the Examiner to withdraw the rejection of this claim.

Dependent Claims 26-30 and 32-35

Claims 26-30 and 32-35 depend from independent Claim 25 and therefore include all of the elements of Claim 25 plus additional elements that further define the invention over the prior art. Accordingly, for at least the reasons set forth above in regard to independent Claim 25 and in light of the additional elements that further define the invention, Applicants respectfully assert that these claims are also in condition for allowance and respectfully request the Examiner to withdraw the current rejections of these claims.

Independent Claim 36

Independent Claim 36 has been rejected as being obvious in light of *Lee* in view of *Chang*. However, Applicants respectfully submit that *Lee* and *Chang* fail to teach or suggest each and every element of Claim 36. For instance, Claim 36 recites the features of: (1) calculating calibration parameters from the relation by calculating a projective transform by comparing spatial characteristics of the corresponding parts with each other; and (2) generating a

Appl. No.: 10/564,286  
Amdt. dated December 7, 2009  
Reply to Office Action of July 8, 2009

wide image video sequence by combining the synchronously recorded video sequences using the calculated calibration parameters and using the projective transform. As discussed above in support of Claim 1, *Lee* and *Chang* fail to teach or suggest these features. For at least this reason, Applicants respectfully submit that independent Claim 36 is patentable over *Lee* in view of *Chang* and respectfully request the Examiner to withdraw the rejection of this claim.

Conclusion

The foregoing is submitted as a full and complete response to the final Office Action mailed July 8, 2009. The foregoing amendments and remarks are believed to have placed the present application in condition for allowance, and such action is respectfully requested. The Examiner is encouraged to contact Applicants' undersigned attorney at (404) 881-4381 or e-mail at [chris.haggerty@alston.com](mailto:chris.haggerty@alston.com) to resolve any remaining issues in order to expedite examination of the present application.

The patentability of the independent claims has been argued as set forth above and thus Applicants will not take this opportunity to argue the merits of the rejection with regard to each dependent claim. However, Applicants do not concede that the dependent claims are not independently patentable and reserve the right to argue the patentability of the dependent claims at a later date if necessary.

It is not believed that extensions of time or fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required therefore (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 16-0605.

Respectfully submitted,



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15 of 16

Appl. No.: 10/564,286  
Amdt. dated December 7, 2009  
Reply to Office Action of July 8, 2009

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